

The Fundamentals of Asset Management – A “Hands-On” Approach

USEPA Asset Management Workshop



February 10-11, 2009

Training Center:

City of San Diego
Metropolitan Operations Center
(MOC II Auditorium)
9192 Topaz Way
San Diego, CA 92123

Sponsored by:

U.S. Environmental Protection Agency's Office of
Water and Office of Research and Development

Metropolitan Wastewater Department
City of San Diego

National Water Research Institute

Registration Deadline: February 3, 2009 (Register Early – Space Is Limited)

The Challenge: Over the past half century, America has spent trillions of dollars building some of the finest infrastructure that history has ever seen. This investment has played a substantial role in the sustained prosperity and quality of life of our country. But, in many communities, this infrastructure is severely stressed from overuse, under funding of maintenance and renewal, and aging.

A comprehensive approach to managing our capital assets is overdue – one that brings “state of the practice” advanced asset management (AM) concepts, tools, techniques, and technologies to bear on managing for cost-effective performance. This approach focuses relentlessly on providing **sustained performance to the customer at the lowest life-cycle cost and at an acceptable level of risk to the organization.**

The Focus: Public sector managers have been managing assets for decades. However, it is clear that what we have been doing in the past will not be sufficient to address the growing and increasingly complex challenges that lie ahead. Practical, advanced techniques for better management of assets have been developed and refined in both the private sector in the U.S. and in water and wastewater agencies around the world. Management thinking is centered on long-term effectiveness, service sustainability, and effective environmental management. *How can these advanced AM concepts, tools, and techniques be most effectively transferred into the water and wastewater industry, more specifically, into your agency? Where to start? How to proceed? How to select appropriate tools?*

The Workshops: The AM challenge for U.S. agency officials is one of “knowledge transfer.” **For that reason, these workshops have been designed as an extensive hands-on experience.** Each workshop:

- ◆ **Incorporates a real-world storyline** to realistically demonstrate an advanced AM way of approaching difficult asset-driven problems.
- ◆ Is built around **participant exercises** that demonstrate the concepts, techniques, and tools of advanced AM.
- ◆ Is centered on **case-based mentoring** by expert AM practitioners.

The agenda is built around five core AM questions. **The workshops focus on demonstrating, step-by-step, how an agency would select and deploy “Best Appropriate AM Practices” that are best suited to that agency.**



The Fundamentals of Asset Management – A “Hands-On” Approach Agenda Highlights

Day One (February 10)

Background and Context

- The Changing Utility Industry
- The Emerging Utility of Tomorrow

Introduction of Storyline, Overview of Fundamental Concepts and Core Practices

- Introduction of Storyline
- Definition of AM
- A “Meta View” of the AM Paradigm
- Managing the Asset Base’s “Potential to Fail”
- Payoffs and Benefits, Downsides
- The “Five Core Questions” and the “10-Step AM Process”

Storyline and Worksheets - Tom’s Bad Day

Core Question 1: What Is the Current State of My Assets?

- What is an Asset?
- Building a “Process Layout” Schematic
- Creating the “Asset Hierarchy”
- Defining the “Data Standard”
- Initial Condition Analysis, Remaining Physical Life
- The Four Major Failure Modes
- Determining Replacement Value
- Financial Accounting Versus Managerial Accounting

Core Question 2: What Is My Required “Sustainable” Level of Service (LOS)?

- What Is “LOS”? Why Do It?
- How It Works (Strategic Level Versus Operations Level)

Core Question 3: Which Assets Are Critical to Sustained Performance?

- Understanding How My Assets Can Fail - The Four Major Failure Modes
- Determining the “Likelihood of Failure”
- Determining the “Consequences of Failure”
- How to Measure Our Agency’s “Business Risk Exposure”?

Discussion, Q & A and Feedback

Day Two (February 11)

Summary of Day 1, Outline of Day 2

Core Question 4: What Are My Best Minimum Life-Cycle-Cost CIP and O&M Strategies?

- What Alternative “Treatment” (Management) Options Are Feasible?
- Which Is the Best Option? – The Basics of “Optimized Renewal Decision Making”

Core Question 4: O&M (Continued)

- Using AM to Drive O&M
- Moving Systematically into Reliability Centered and Condition-Based Maintenance

Core Question 4: CIP (Continued)

- Using Advanced AM to Drive CIP
- Strategic CIP Validation

Core Question 5: What Is My Best Long-Term Funding Strategy?

- So, Valuation Really Does Matter?
- Determining a Sustainable Renewal Funding Level
- Effectively Telling the Funding Story
- The “Whole of Business” Perspective – Using Advanced AM for Rate Setting and Budgeting
- Building Your First Asset Management Plan (AMP)

Focus Topic 1: Deploying an Advanced AM Program (As time permits)

- The Four Fundamental Deployment Strategies
- “Gap Analysis” Benchmarking and Developing the Advanced AM Improvement Program
- The Human Side
- The Political Side
- Implementation Work Plans – Lessons Learned

Closing Summary, Questions, Comments

About Our Trainers:

Mr. Steve Allbee – USEPA Project Director, Gap Analysis; primary author, USEPA’s **The Clean Water and Drinking Water Infrastructure Gap Analysis**; 25 years EPA – development of financing programs; BA, MA, MPA.

Mr. Doug Stewart, P.E. – Technical Director and Principal Consultant – GHD; editor, **International Infrastructure Management Manual** (sixth edition); former Asset Management Program Director, Orange County Sanitation District; 30 years engineering experience, 10 years utility management; BS, MSCE.

More information about asset management is available at www.epa.gov/owm/assetmanage/assets_training.htm

Registration: Early Registration by February 3, 2009, is \$225. Registration after February 3 is \$275. Registration includes workshop, continental breakfast, break refreshments, and lunch on both days. Cancellations after February 3 are subject to a \$50 cancellation fee.

Register online at www.regonline.com/AssetManagement.

Questions? Contact Tammy Russo, Workshop Coordinator, at trusso@nwri-usa.org or (714) 378-3278.

Overnight Accommodations: Attendees are required to make their own hotel arrangements. Hotel options are provided on the registration website at: www.regonline.com/AssetManagement.